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10/768,377

01/30/2004

Dan Llewellyn

60,137-231; 265-3038-U

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EXAMINER

DURAND, PAUL R

ART UNIT

PAPER NUMBER

3721

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/768,377  
Filing Date: January 30, 2004  
Appellant(s): LLEWELLYN, DAN

**MAILED**  
**MAR 15 2007**  
**GROUP 3700**

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Theodore Olds  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/4/2006 appealing from the Office action mailed 12/29/2005.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

Art Unit: 3721

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 112***

Claims 1,4,5 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to these claims, the recitation "said control" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

Claims 1,3-5,17,21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Yiu (US 6,854,530).

In regard to claim 1, Yiu discloses the invention as claimed including first and second drive elements comprised of common solenoid 20, which drives a plunger 21 in a first direction away from an attachment element, storing energy in spring 14, driving the plunger in a second direction opposite the first direction, releasing the stored energy in combination with the driving force of the solenoid and a sensor and control unit comprised of a microprocessor unit 30, with photodiode 36 and thyristor 37, which controls the operation of the tool based on the position of the plunger (see abstract, Figs.1,5,6 and C2,L6 – C6,L59).

In regard to claim 3, Yiu discloses the invention as claimed including the solenoid 20 centering the plunger as it is moved between the first and second position (see Fig.1).

In regard to claims 4 and 5, Yiu discloses the invention as claimed including storing energy in a force storage mechanism comprised of spring 14, and then initiating a second drive force (see Figs.5,6 and C2,L6 – C6,L59).

In regard to claim 17, Yiu discloses the invention as claimed including a plunger 21, blade 25, guided in housing 10, coil in the form of solenoid 20, which drives the plunger in a first and second direction, spring 14 and driving the plunger in a second direction opposite the first direction, releasing the stored energy in combination with the driving force of the solenoid and a sensor and control unit comprised of a microprocessor unit 30, with photodiode 36 and thyristor 37, which controls the operation of the tool based on the position of the plunger (see abstract, Figs.1,5,6 and C2,L6 – C6,L59).

In regard to claims 21 and 22, Yiu discloses the invention as claimed including capacitors 34, which power the micro processing unit 30, the micro processing unit providing power to the solenoid as the plunger moves in a second direction from the retracted position.

### **(10) Response to Argument**

#### **Examiner Interpretation of The Independent Claims**

Claims 1 and 17 are the only independent claims.

Claim 1 is directed toward a device for driving an attachment into a work-piece. The device is comprised of a first and second drive element, which is disclosed in the specification on page 3 as an electric solenoid. The drive elements actuate or operate alternatively to drive a plunger 26, in opposite directions inside the tool. Moreover, the claim further recites that the first and second drive element are comprised of the same drive element, mainly a single solenoid 22, as shown in the figures.

The claim further recites a position sensor 50 (as shown in figure 6), which senses the position of the plunger and a control system 34, which lacks antecedent basis in the claim, but is generally understood to actuate the solenoid based on the sensed position of the plunger. Both the control system and the position sensor are generically defined in the specification, so it is unclear as to what type of position sensor and control system is novel to the invention or how the position sensor and control system actually function to determine the position of the plunger.

Art Unit: 3721

Claim 17 is directed toward a power nailer, which utilizes a plunger 26, having a driving blade 28. The blade is guided in motion by guide 29. As discussed in claim 1, the plunger is driven in a first and second direction through the use of a coil, which is synonymous to a solenoid or electric coil. A spring 24, is located on a side of the coil opposite the nail side, which provides an additional driving force on the plunger when it is moved in a second direction. Additionally it appears from the claim that the same coil is recited again after the spring on line 7 of the claim, though it is understood to the examiner to be the same coil as claimed on line 5.

Additionally, and as also disclosed above, the nailer further comprises a control 50, which receives a signal from a position sensor and actuates the solenoid based on the sensed position of the plunger. Furthermore, both the control system and the position sensor are generically defined in the specification, so it is unclear as to what type of position sensor and control system is novel to the invention or how the position sensor and control system actually function to determine the position of the plunger.

**The Rejection Under 35 U.S.C. § 112, 2<sup>nd</sup> Paragraph is Proper and Should be Sustained.**

In claim 1, line 11, the claim recites "said control". However, appellant has failed to positively recite the control element. From the MPEP § 2173.05(e), "A claim is indefinite when it contains words or phrases whose meaning is unclear. The lack of clarity could arise where a claim refers to "said lever" or "the lever," where the claim

contains no earlier recitation or limitation of a lever and where it would be unclear as to what element the limitation was making reference.”

The rejection of this claim was maintained to bring the claims into correct form prior to allowance or appeal. While the examiner did not enter the after-final amendment to correct this rejection, it was inadvertent and will be corrected pending outcome of this appeal. However, as is normal practice within the office, this limitation, though indefinite, has been addressed in the final rejection.

**The Rejection of Claim 1 Under 35 U.S.C. § 102(b) as Being Anticipated by Yiu is Proper and Should Be Maintained.**

Appellant argues that the rejection of claim 1 in view of Yiu is improper since Yiu does not anticipate the sensor limitation as Appellant has recited on lines 11-14 of the claim.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”

*Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *See also* MPEP § 2133.01. Moreover, “claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.” *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). *See also* MPEP § 2114.

As stated above, both the control system and the position sensor are generically defined in the specification and as such, it is difficult to ascertain the scope of the



position sensor and control system. However, given the broadest reasonable interpretation of this limitation, the position sensor can encompass any type of mechanism to sense the position of the plunger.

Yiu in addition to disclosing a single drive solenoid 20, which drives a plunger 21 in a opposite directions, also discloses a control system designated as a microprocessor unit ("MPU") 31 (see figure 2 and 3). The MPU controls the operation of the solenoid through the use of a photodiode 36, which operates as part of an actuating device and sends actuating signal pulses to the MPU to operate the solenoid and drive the plunger 21 (see column 4, lines 12-18). As shown in figure 5 and column 4, line 54 – column 5, line 44, these actuating signals are sent in response to the position of the plunger located in either a lower or upper (alternatively, a frontward or rearward) portion of the solenoid, with the actuating signals turned off as the plunger passes through the middle portion of the solenoid (see column 5, lines 5-10).

Appellants' argument that Yiu does not sense the position of the plunger as it reaches a rearwardly spaced position is simply not correct. As demonstrated by the reference, the photodiode turns on and sends actuating signals to the MPU when the position of the plunger is located in a front or rear position of the solenoid, hence it is deemed to meet the sense limitation.

Alternatively, Appellant is attempting to define the novelty of the device in terms of functional language. As discussed above, appellant must define the novelty of his invention in terms of the structure of the elements of his invention and not in terms of

Art Unit: 3721

what they do. As Yiu clearly discloses the use of a position sensor in the form of a photodiode, as well as the other elements of the claim, the rejection is proper.

**The Rejection of Claim 17 Under 35 U.S.C. § 102(b) as Being Anticipated by Yiu is Proper and Should Be Maintained.**

As discussed above, "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). *See also* MPEP § 2133.01. Moreover, "claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). *See also* MPEP § 2114.

Appellants' argument that Yiu does not sense the position of the plunger as it reaches a rearwardly spaced position is simply not correct. As demonstrated by the reference and discussed in detail above, the photodiode turns on and sends actuating signals to the MPU when the position of the plunger is located in a front or rear position of the solenoid, hence it is deemed to meet the sense limitation.

Alternatively, Appellant is attempting to define the novelty of the device in terms of functional language. As discussed above, appellant must define the novelty of his invention in terms of the structure of the elements of his invention and not in terms of what they do. As Yiu clearly discloses the use of a position sensor in the form of a photodiode, as well as the other elements of the claim, the rejection is proper.

Art Unit: 3721

**The Rejection of Claims 21 and 22 Under 35 U.S.C. § 102(b) as Being Anticipated by Yiu is Proper and Should Be Maintained.**

Appellant argues that prior art reference of Yiu is ambiguous as to the function of the capacitors, and that because of this, the examiner has not satisfied the burden of anticipation.

On column 4, lines 4-11, Yiu teaches the use of a capacitor 34, which in addition to the providing stabilized power to the MPU, can also provide power to “other electric parts or elements”. The MPU controls the actuation of the solenoid to drive the plunger back and forth. As Yiu discloses the capacitor provides stabilized power to the MPU, Yiu meets this element of the claim and the rejection is proper.

Alternatively, even if the capacitor providing power to the MPU is deemed not to anticipate this element, Yiu clearly anticipates other uses for the capacitors ability to power other elements of the tool.

**Conclusion**

Yiu clearly anticipates all the elements of the claims, and as such the rejection under 35 U.S.C § 102(b) is proper. Moreover, the rejection of independent claim 1 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph is proper as there is a lack of antecedent basis in the claim. The rejection of these claims should be maintained.

**(11) Related Proceeding(s) Appendix**

Art Unit: 3721

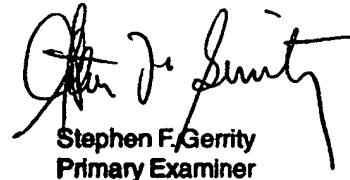
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Paul Durand

  
Stephen F. Gerrity  
Primary Examiner

Conferees:

Stephen Gerrity 

Rinaldi Rada 